FLORIDA
BIODIVERSITY
PROJECT

June 19, 2000

Mr. Elmar Kurzbach
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: U.S. Highway 41 SEIS Scoping Comments

Dear Mr. Kurzbach ,

The Florida Biodiversity Project (FBP) submits the following scoping comments in response to the Federal Register notice on May 5th regarding the Corps intent to prepare an SEIS to address a change in design of U.S. Highway 41 (Tamiami Trail). These written comments supplement the oral comments presented by FBP at the June 8th scoping meeting in Homestead.

The SEIS presents an important opportunity to correct many of adverse ecological impacts of US 41. The Corps has an extensive history of building public works projects that have had severe adverse environmental effects (Morgan 1971). Although the Corps did not build U.S. 41 it manages water control structures such as gates, levees, and pumps along the highway. The FBP, therefore, is very concerned about the adverse ecological effects of US 41 including substantial impacts on wildlife. In general, the FBP finds the range of preliminary alternatives presented in scoping notice as grossly inadequate and in violation of NEPA for the reasons discussed below. The position of the FBP is the proposed project should be: 1) fully consistent with Everglades restoration goals and objectives and 2) adverse ecological impacts of US 41 should be minimized to the maximum extent practicable.

The FBP requests that these scoping comments be included in the administrative record. Additionally, the FBP requests to be placed on the "interested parties" list for this proposed action and related projects so that we may receive additional information including a scoping report and a copy of the draft SEIS.

I. NEPA SCOPING FRAMEWORK

To help assure that that the SEIS will meet the required standards of NEPA compliance the FBP will briefly summarize the NEPA scoping requirements. NEPA is our basic national charter for protection of the environment. 40 C.F.R. § 1500.1 (emphasis added). NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.

Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1 (emphasis added). "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analysis in

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environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement." 40 C.F.R. § 1502.24.

The Environmental Impact Statement "shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1 (emphasis added). Environmental Impact Statements "shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made." 40 C.F.R. § 1502.2(g) (emphasis added).

Scoping is the public process designed to determine the scope of issues to be addressed in the EIS. Scoping should occur as early as possible and should be an open process intended to obtain the views of other agencies and the public regarding the scope of the EIS.

A. Objectives

The objectives of scoping include:

- Notice and invitation of other agencies to participate
- Determine the scope and significance of issues
- Identify and eliminate issues determined to be insignificant
- Allocate assignments among agencies
- Identify related environmental documents being prepared
- Identify other environmental review and consultation requirements
- Set page and time limits
- Adopt procedures to combine the environmental analysis process with scoping

B. Definition of Scope and Actions evaluated

The scope of an EIS consists of the types of actions to be included, the range of alternatives, and the impacts to be considered. 40 C.F.R. § 1508.25. The lead agency should consider three types of actions, three types of alternatives, and three types of impacts. Scoping is also used to determine which specific impacts (e.g. hydrology, vegetation, wildlife) must be evaluated in the EIS.

1. Types of Actions to be evaluated.

The types of actions to be evaluated include "connected" actions, "similar" actions, and "cumulative" actions.

"Connected" actions are those that are closely related. Actions are closely related if they automatically trigger other actions, cannot proceed unless other actions are taken previously, or are interdependent parts of larger action and depend on the larger action for their justification.

"Similar" actions are those which when viewed with other reasonably foreseeable future proposed actions, have similarities that provide a basis for evaluating their environmental consequences together, but are not necessarily connected.

"Cumulative" actions have cumulative significant impacts when reviewed with other proposed actions and should be discussed in the same EIS.

2. Types and Range of Alternatives to be evaluated.

The scope of alternatives to the proposed action include the "No Action" alternative, other reasonable courses of action, and mitigation measures other than those included in the proposed action. The alternatives section is the heart of the EIS. The EIS must "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." C.F.R. § 1502.14(a) (emphasis added.)

3. Types of Impacts to be evaluated.

The scope of impacts to be evaluated in the EIS include direct impacts, indirect impacts, and cumulative impacts.

"Direct effects, which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508(a).

"Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems including ecosystems." 40 C.F.R. § 1508.8(b) (emphasis added).

"Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative actions can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7 (emphasis added).

C. Scoping Reports

The lead agency may prepare a scoping report to make public the decisions that have been made during the scoping process. A scoping report generally contains a summary of the issues to be evaluated in the EIS and the views of those participating in the scoping process. CEQ Scoping Guidance, April 30, 1981, Π(b)(6).

II. BACKGROUND

A. General

In 1928 the Tamiami Trail (US 41) was the first highway built across the wilderness of the Everglades and the Big Cypress Swamp. The highway crosses sensitive wetland habitat such as marshes, sloughs, prairies, and Cypress swamp. It is recognized as the first barrier to the natural sheet flow from the Everglades to Florida Bay. The two-lane highway consists of a raised road bed, a borrow canal on the northside, and an associated levee (L-29). Over the decades only minor improvements have been made such as installation of additional culverts, resurfacing, widening the roadbed and shoulder, and installation of guardrails. No major environmental improvements have been made.

B. Comprehensive Everglades Restoration Plan

Everglades restoration is a "connected" action of the US 41 project. In order to authorize Everglades restoration planning the Water Resources Development Act of 1996 (WRDA 1996) was passed. WRDA stated the purpose of the authorized comprehensive plan; "The Secretary shall develop, as expeditiously as practicable, a proposed comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem."

The Final Restudy components for Water Conservation Area 3 decompartmentalization include backfilling the L-29 canal and elevating the Tamiami Trail. Section 9.1.7.2 Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement (AA, QQ and SS) states:

> "These features include the construction of new water control structures and the modification or removal of levees, canals, and water control structures in Water Conservation Area 3A and B located in western Broward County. The purpose of these features is to reestablish the ecological and hydrological connection between Water Conservation Areas 3A and 3B, the Everglades National Park, and Big Cypress National Preserve. Sheetflow obstructions will be removed with the backfilling of the Miami Canal and southern 7.5 miles of L-67A Borrow Canal, removal of the L-68A, L-67C, L-29, L-28, and L-28 Tieback Levees and Borrow Canals, and elevating of Tamiami Trail" (USACE 1999) (emphasis added).

The Appendix A-4 describes component QQ6 , the decomparmentalization of WCA 3. Structural changes include removing the L-29 levee and canal to restore sheetflow into Everglades National Park. In addition, "elevate Tamiami Trail (U.S. 41) through the installation of a series of bridges between L-31N and L-28 consist with conveyance capacities determined at I-75 and any increases required due to inflows downstream of I-75 and upstream of Tamiami Trail" (USACE 1999).

WRDA 1996 also authorized a series of Critical Projects, one of which is the Tamiami Trail Culverts. The purpose of the Project is to improve water flows across US 41from SR 92 to 50

Mile Bend by constructing 87 additional culverts under the US 41 at 30 separate locations. While the Project may help restore a more natural hydopattern to the southern Big Cypress Basin, the Project will not substantially reduce barriers to wildlife movements, reduce roadkill, or address fragmentation and edge effects.

C. Modified Water Deliveries Project

Under current Corps water management operations approximately 80-85% percent of water flows are channeled into Western Shark Slough, rather than the 45% that would be the case under historical conditions. In 1992 the Corps issued its GDM for Modified Water Deliveries to Everglades National Park (MWD). The purpose of the project was to reroute large volumes of water to restore flows into NE Shark River Slough.

In 1999, the FWS issued its Final Biological Opinion on the MWD project and determined that the Corps water management scheme jeopardized the continued existence of the Sparrow and adversely modified its critical habitat (USFWS 1999a). To correct the problem the FWS presented a RPA that mandated that Corps by March 1, 2002 ensure that 60% of flows enter east of the L-67 extension to restore flows into NE Shark River Slough.

Also in 1999, Everglades National Park released a report that determined that some structural components as currently designed were not large enough to pass the large volume of water necessary to restore natural flows (Van Lent 1999). Some components would have to be five times larger in order to accommodate peak flows and that the elevation of Tamiami Trail seriously limits the amount of water that can be passed to NE Shark River Slough.

In the original MWD Project, the only US 41 component was to raise Tigertail camp (USFWS 1999a). Now with updated hydrological analysis the current proposed action to raise the roadbed has apparently been added to the list of MWD Project components.

III. ECOLOGICAL EFFECTS OF ROADS

A. General Effects

There is substantial, credible, and compelling evidence on the adverse ecological effects of roads. The literature contains over 6,000 scientific articles. Short of total destruction almost nothing is worse than a road through a natural area. Roads can alter hydrology, kill and injure wildlife, create habitat destruction and fragmentation, create edge effects, spread exotic species, encourage development, poaching, overhunting, act as a source of pollution, and spread refuse (Noss 1995).

Wildlife impacts are especially severe. The U.S. Humane Society arrived at a conservative estimate that approximately one million animals are killed per day on highways in the United States. Highways are the classic death trap. Roadkill attracts other animals which are in turn killed. Warm sun-baked pavement also attracts cold blooded reptiles and amphibians.

Many secondary and cumulative effects of roads are more subtle such as the long-term effects on ecological processes. Most government agencies disregard the ecological effects of

roads and justify existing road design as benefiting travel and recreation and that changes would be unacceptable to the motorist (Noss 1995).

B. US Highway 41

US Highway 41 is especially egregious since it slices through almost 90 miles of the Everglades/Big Cypress region , one of the worlds most endangered ecosystems. The highway which was completed in 1929 crosses through sensitive marshes, sloughs, prairies, and cypress domes. The highway presents a triple barrier: 1) a wide roadbed constructed of fill material; 2) a borrow canal; and 3) an associated levee. The highway has caused serious impacts on hydrology, vegetation, and wildlife.

Although the highway has a series of culverts it continues to acts like a dam blocking sheet flow. For example, the L-29 along the Tamiami Trail has increased the water depth in WCA 3A, altering the seasonal pattern of drying and flooding (Davis and Ogden 1994). The associated borrow canal increases drainage, creates artifical deep water habitats, fragments habitat, and acts as a conduit for pollution and exotic species.

Wildlife has been seriously impacted by US 41. Harris (1991) notes that while some native fauna evolved with water barriers, they did not evolve with the ability to evade the lethal effects of traffic. Collisions with motor vehicles is now the number one source of mortality on all of Florida's large vertebrate threatened and endangered species. Harris concludes that "poorly designed roads are more effective as an isolating force around habitat islands than is the sea that surrounds oceanic islands." Habitat fragmentation and isolation are key factors contributing to the erosion of biological diversity in the Everglades region (USACE 1999; USFWS 1999b). The effects are evident with the incidence of endangered species mortality.

The FBP is especially concerned about potential mortality impacts to the endangered Florida panther. Collisions with motor vehicles is the number one source of human caused mortality of the panther. Several panthers have already been killed on U.S. 41. While fencing and underpasses have been installed on I-75 and SR 29 to reduce mortality, it is our understanding no such protections are planned U.S. 41. Elevating US 41 would allow panthers, bears, deer, and other animals to cross the highway safely. Since the panther is one of the most endangered animals in the world, agency actions should minimize potential adverse impacts (USFWS 1999b).

Slow moving animals such as turtles and snakes are the most frequently seen victims of vehicles collisions on U.S. 41. Even more secretive species such as otters and the Everglades mink are killed (Humphrey 1992). Culverts and bridges can alter flow patterns and can block or restrict the passage of fish, amphibians and reptiles.

Vegetation along U.S. 41 has been altered since there is clear evidence of increased growth of woody vegetation on south side of U.S. 41. The highway acts as a corridor for the spread of exotic plant species. Higher filled and developed areas exhibit a more favorable habitat for the spread of exotics.

The Restudy in Section 5.5.1 elaborates on roads, canals, and fragmentation:

> Increasing spatial extent and improving habitat quality can provide a basis for improving species abundance and diversity. However, compartmentalization caused by construction of physical barriers such as dikes, canals, levees, and roads, or even hydrologic barriers (such as the Water Conservation Areas) has fragmented the system by creating a series of poorly connected natural areas. These barriers have restricted the movement of many fish and consequently reduced their range. Fragmented communities are more likely to lose species because the number of individuals in each fragment may be too small to persist. The smaller the fragment, the higher is the likelihood of losing species or favoring an imbalance in the species that do inhabit the areas. Moreover, fragmentation itself alters the landscape by breaking connections between the various habitat types that were distributed historically across the landscape. Therefore, improving the connectivity of habitats will improve the range of many animals and their prey-base and provide for a more natural balance of species within the system. The physical barriers that created the fragmented environment themselves affect species abundance. The introduction of deep canals which act to drain surrounding areas, affect the ability of wading birds to forage over large areas (USACE 1999) (emphasis added).

IV. SUSTANTIVE ISSUES

A. The SEIS must analyze a reasonable range of alternatives as required by NEPA.

NEPA requires that agencies rigorously explore and objectively evaluate all reasonable alternatives. C.F.R. § 1502.14(a). The FBP maintains that to comply with NEPA the SEIS should include a reasonable range of alternatives. The FBP believes the four preliminary alternatives presented in the scoping notice and handouts represents only variations of the same alternative -- - to build four or five bridges across a limited ten mile span. The alternatives only represent different locations of the bridges or the alignment of the roadbed. As noted above, NEPA requires that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The FBP is concerned that essentially analyzing just one alternative suggests that Corps may be engaging in post-hoc rationalization in the SEIS to justify decisions that have already been made.

A range of alternative elements could include but not be limited to the following:

- Range of water conveyance design – culverts, gates, bridges, elevated highway or combination.
- Range of project area – L-31N to L-67, L-31N to L-28, L-31N to CR 92.
- Methods of water conveyance – passive channelization, pumped channelization, spreader canals, natural sheetflow.

- Methods of water containment – removal or retention of levees, removal or retention of the borrow canals, elevation or current surface configuration of the roadbed.

A range of alternatives that could be analyzed but should not be limited to the following:

- The "No Action" alternative.
- Constructing the four or five bridges and removing the L-29 levee and borrow canal.
- Constructing four or more bridges and removing the L-29 levee and borrow canal from L-31N to L-28.
- Reconstructing US 41 as a viaduct raising the roadbed 8-10 feet high from L-31N to L-28.
- Constructing a continual series of bridges from L-31N to Collier Seminole State Park
- Reconstructing US 41 as a viaduct raising the roadbed 8-10 feet from L-31N to CR 92 (Collier Seminole State Park) and removing the borrow canal and L-29 levee.

The FBP strongly urges the Corps to include the alternative of raising US 41 8-10 feet above the water surface the entire 75 miles from L-31N to CR 92 (Collier Seminole State Park). This alternative would be consistent with the goals of WRDA 1996, the CERP, MWD Project, and the best available science.

The implementation of this alternative would likely greatly improve hydrology and restore sheet flow, restore native vegetation, reduce soil subsidence, vastly reduce roadkill and wildlife injury, enhance wildlife movement, reduce fragmentation and edge effects, and reduce pollution.

B. The SEIS must use the best available scientific information.

Consistent with NEPA the SEIS is required to use the best available scientific information. 40 C.F.R. § 1500.1; 40 C.F.R. § 1502.24. This should include a comprehensive literature review of the ecological effects of roads. For example, the conservation organization Wildlands Center for Preventing Roads (WCPR) maintains a database of over 6,000 citations on the ecological effects of roads. In addition, the journal *Conservation Biology* released a special issue in 1999 addressing the ecological impacts of roads. This information should be included in the SEIS. The FBP in conjunction with WCPR and the Biodiversity Legal Foundation will submit to the Corps additional relevant studies on the adverse ecological effects of roads which should be included in the SEIS.

Additionally the Corps must analyze historical data regarding hydrology, vegetation, soils, and wildlife. The FBP recommends the SEIS be peer reviewed by CROGEE.

C. The SEIS must fully analyze the direct, indirect, and cumulative impacts of the alternatives.

Consistent with 40 C.F.R.§§ 1508(a); 1508.8(b); 1508.7 the Corps must analyze the direct, indirect, and cumulative impacts of the alternatives. This should include impacts on the

major ecosystem components such as hydrology, soils, vegetation, wildlife, and growth inducing effects.

Hydrology analysis should include impacts on water quality, quantity, distribution, depth patterns, and timing. Past historical analysis of the 'No Action' alternative and cumulative impacts should be included. Altered hydrology has represented the greatest threat to the ecological integrity of the Everglades (Lodge 1994). Since there is considerable controversy surrounding the Natural System Model and the South Florida Water Management District Model, the SEIS should explicitly state how the alternatives will allow the conveyance of peak flows during wet years. Future modeling may indicate higher flows are required for restoration, therefore extra water conveyance capacity should be incorporated to avoid having to rebuild the highway a second time.

Wildlife analysis should include impacts on threatened, endangered, rare, imperiled species, and other non charismatic unlisted species that may be impacted by US 41 such as mammals, amphibians, reptiles, birds, and fish. The SEIS should incorporate the information of the FWS Multi-Species Recovery Plan (USFWS 1999b). The analysis should include the impacts of roadkill, injury, reduced fitness, habitat fragmentation, habitat degradation, restriction of wildlife movements, altered behavioral patterns, and harassment.

The Corps must also analyze any "growth inducing" effects of "improving" the highway such widening, providing additional traffic lanes, interchanges, or recreational access areas.

D. The SEIS must include a broad geographic scope.

Because highways have large spatial and temporal impacts that extend beyond the highway corridor, the geographic scope of the SEIS must be broad. The zone of influence must be expanded beyond the ten mile project corridor. The FBP recommends that the geographic scope include WCA's 2A, 2B, 3A, and 3B, Everglades National Park, Big Cypress National Preserve, Miccosukee Indian Reservation, Fakahatchee State Preserve, Collier Seminole State Park, Ten Thousand Islands National Wildlife Refuge, Everglades City, and Chokoloskee.

The FBP urges the Corps to not unduly restrict the study area. There may not be a second chance to correct the ecological impacts of US 41. The FBP understands that a broader geographic scope makes the analysis more complex and time consuming, but nonetheless, the FBP believes the recommended area is consistent with the spatial and temporal impacts of roads and the requirements of NEPA.

E. The proposed timeframe for preparation of the SEIS is inadequate.

The FBP is concerned that the Corps has proposed an unduly short timeframe for the preparation of the SEIS. The scoping notice states that the draft SEIS is expected to be available for public review during the 4th quarter of this year. Since scoping review and recommendations will take a month or more --- that leaves only five months to prepare the SEIS. In order to fully analyze a reasonable range of alternatives as mandated by NEPA a longer timeframe would likely be required. The proposed brief timeframe and essentially presenting only one preliminary

alternative for the SEIS gives the impression that the document will be used to justify decisions that have already been made.

The SEIS to fully comply with NEPA must comprehensively address many complex legal, ecological, financial, and technical issues. The preparation of the SEIS should not be rushed. The bottom line is that the Corps must get the draft SEIS right the first time to avoid needless litigation, expense, and delay. Realistically, there may not be another chance to comprehensively address the adverse impacts of U.S. 41 and have sufficient funding to reconstruct the highway in a manner that minimizes those impacts. Because of the complex issues involved, the FBP urges the Corps to take twelve months instead of five months to adequately prepare the SEIS.

F. The Corps should designate the FWS and the NPS as full cooperating agencies in the preparation of the SEIS.

A cooperating agency may be any federal agency other than the lead agency that has jurisdiction by law or special expertise with respect to the environmental impacts expected to result from a proposal. 40 C.F.R. § 1508.5 (emphasis added).

A lead agency must request must request the participation of cooperating agencies as early as possible in the NEPA process, use environmental analysis and proposals prepared by cooperating agencies as much as possible, and meet with cooperating agencies at their request. 40 C.F.R. 1501.6(a).

Because the proposed action will likely impact many endangered and threatened species and other wildlife species over large areas of the Greater Everglades ecosystem, the FWS should be designated as a full cooperating agency in the preparation of the SEIS. Likewise, because the project will have substantial impacts on the hydrology, wildlife, vegetation and soils in Everglades National Park, the NPS should be designated as a full cooperating agency in the preparation of the SEIS. NPS scientists have considerable expertise on the Park's hydrology, vegetation, and wildlife.

Designation of the FWS as a cooperating agency would help ensure early and full consultation under Section 7 of the ESA and wetland mitigation requirements.

G. The SEIS should include an analysis of funding options including a toll system.

The FBP is concerned that a viaduct highway alternative will be inappropriately dismissed as too expensive. While he cost of construction is a major issue that deserves analysis, it should not serve as a convenient excuse to inappropriately limit reasonable alternatives. The Corps should analyze the feasibility of instituting a toll system to offset the cost of construction. Presently, it costs $6.50 to drive the 100 miles from Ft. Lauderdale to Ft. Pierce on the Florida Turnpike. In contrast, it costs only $1.50 to drive across 78 miles of sensitive wetlands on I-75. For example, a toll of $5.00 could be implemented to offset the expenses of raising the roadbed

as a viaduct, thus minimizing the adverse ecological impacts. Various funding options require analysis.

H. The SEIS should analyze construction methods of elevating U.S 41.

Major highways crossing open water or swamps have been elevated. Two such examples include the Overseas Highway spanning the Florida Keys and Interstate 12 in Louisiana that crosses Cypress swamps. Technology is not a limiting factor to construction of a viaduct type highway. New modular construction methods are available that reduce the cost and time of construction. Although a viaduct type highway may take several years to complete it would have the most environmental benefits and serve as a pilot project for other highway modifications. These construction techniques merit analysis.

I. The Corps should issue a scoping report.

As discussed in Section I, in order to provide adequate public disclosure and possible additional input, the Corps should draft a scoping report that would summarize the results of the scoping comments and decisions by the Corps and cooperating agencies as to the scope of the SEIS. This report should be distributed to government agencies and the public as soon as practicable.

V. CONCLUSION

The history of South Florida over the last century is full of examples of infrastructure "improvements" such as roads and canals built in sensitive ecosystems that were initially and universally regarded as beneficial. Only when we learned more about science and ecology did we realize the extensive ecological damage that roads and other infrastructure projects cause to ecosystems such as the Everglades. Unfortunately, after extensive ecological damage is done the costs of restoration dwarf the original costs of these short-sighted projects.

The mistakes of the past do not have to be repeated in the future. WRDA and the CERP provide the legal, technical, and financial resources to achieve Everglades restoration. The fundamental question is whether elected officials and government agencies have the political will to achieve real "restoration" and not merely "tweak" the system by building "mega-projects" that largely serve to fuel future population growth. A minimum hydrological objective is to decompartmentalize the WCA's (Science Sub-Group 1993). Clearly, elevating U.S. 41 would help achieve this minimum objective. The FBP urges the Corps to use the best available science, fully comply with all statutes and regulations, and incorporate the above scoping recommendations in the draft SEIS.

Sincerely,

Brian Scherf
Board member

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